



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,375	07/28/2003	Fang Hao	Hao 1-2-4 (LCNT/125103)	6538
46363	7590	01/14/2009	EXAMINER	
WALL & TONG, LLP/ LUCENT TECHNOLOGIES, INC 595 SHREWSBURY AVENUE SHREWSBURY, NJ 07702			WILSON, ROBERT W	
			ART UNIT	PAPER NUMBER
			2419	
			MAIL DATE	DELIVERY MODE
			01/14/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,375	<b>Applicant(s)</b> HAO ET AL.	
	<b>Examiner</b> ROBERT W. WILSON	<b>Art Unit</b> 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19, 20 and 22-28 is/are rejected.
- 7) ☒ Claim(s) 18, 21, 25, & 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2419

### **DETAILED ACTION**

1. In view of the appeal filed on 11/3/08, PROSECUTION IS HEREBY REOPENED as set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/JAYANTI K PATEL/  
Supervisory Patent Examiner, Art Unit 2419

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2419

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 6, 10, 11-12, 15-17, 19-20, 23-24, & 26-28 are rejected under 35 U.S.C.

103(a) as being unpatentable over Chen (U.S. Patent No.: 6,567,380) in view of Bi (U.S. Patent No.: 6,757,278)

Referring to claim 1, Chen teaches: a method for improved inter-domain routing convergence (Router per Fig 3 performs the method utilizing the message formats per Figs 5 & 6 of Chen ) comprising:

transmitting information associated with a route update or withdraw (Figure 5 shows the message listing withdrawn routes)

Chen does not expressly call for: transmitting a reason

Bi teaches: transmitting a reason (message sent has information element with reason encoded into information element with the reason cause code per col. 7 lines 49 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the transmitting a reason of Bi to the routing message of Chen in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

In addition Chen

Regarding claim 2, wherein said reason information transmitted along with said route update or withdraw (withdrawn routes are defined in Fig 5)

Referring to claim 3, the combination of Chen and Bi teach: the method of claim 2 and reason for update or withdraw wherein the information is encoded as a code and Chen teaches: multiple fields can be used to send information per Fig 5 (Three of these fields would be considered a triplet)

Regarding claim 6, wherein a node receiving said reason information uses said reason information to determine which of its candidate route are also affected by substantially the same even that triggered the initial route update or withdrawn and which of it candidate router are not affected (after receiving the routing update message such as withdraw routes which implicitly carries a reason for the withdraw of routes the receiving router inherently assess the routes in its routing table determines which routes the table are affected per col. 6 line 50 to col. 8 line 25)

Regarding claim 10, further comprising transmitting version information for the route update or withdraw (Version per Fig 8)

Art Unit: 2419

Regarding claim 11, wherein the version information comprises a version of the update or withdraw for each node pair and the change in node pairs form the route previously advertised (Version per Fig 8 applies to all update messages)

Regarding claim 12, wherein a node receiving said version information uses said version information to determine the stability of its candidate router (Chen per col. 6 lines 10 to col. 8 line 9)

Referring to claim 15, Chen teaches: a apparatus for improved inter-domain routing convergence (Transmitting Router & receiving router per Fig 1 which are shown individually per Fig 3 or apparatus of Chen ) comprising:

means for identifying routes to be update or withdraw (Route processor per Fig 3 or means for identifying and which identifies the routes to be withdrawn per message shown in per Figure 5 )

means for transmitting (Network interface per Fig 3)

Chen does not expressly call for: transmitting a reason

Bi teaches: a reason (message sent has information element with reason encoded into information element with the reason cause code per col. 7 lines 49 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the reason of Bi to means for identifying and means for transmitting associated with the routing message of Chen in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

Referring to claim 16, the combination of Chen and Bi teach: the apparatus of claim 15 and Chen teaches: means for receiving information associated with a received update or withdrawn (Network Interface per Fig 3 receives withdraw message per Fig 5)

means for using said received information to determine which of its candidate routes are also affected by substantially the same event that triggered an initial route update or withdrawn and which of its candidate route are not affected ( The ROUTE PROCESSOR per Fig 3 or means for using processing the withdrawn route information. Withdrawn information which was received due to a triggered event as well as other updates such as flags per Fig 5 or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Chen does not expressly call for: receiving reason information

Bi teaches: receiving reason information (message sent has information element with reason encoded into information element with the reason cause code per col. 7 lines 49 to 67)

Art Unit: 2419

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the receiving a reason of Bi to means for receiving and means for determining of Chen and Bi in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

Regarding claim 17, wherein said candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn. Any route that has been withdrawn will inherently be a transient route and the receiving router labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9)

Regarding claim 19, further comprising means for transmitting version information for the route update or withdraw (NETWORK INTERFACE per Fig 3 (means for transmitting) and Version Pg 8 of RFC 171)

Regarding claim 20, further comprising:

means for receiving version information; with an update or withdraw (NETWORK INTERFACE per Fig 3 or means for receiving) and

means for using said received version information to determine the stability of its candidate routers (ROUTE PROCESSOR per Fig 3 (means for using) and RFC 1771 teaches receiving version number and Chen teaches determining stability based on version per col. 6 lines 10 to col. 8 line 9)

Referring to claim 23, Chen teaches: a communication network having improved inter domain routing convergence (Fig 1 per Chen or network) comprising a plurality of network devices (Fig 1 of Chen has a plurality of routers or network devices) each of said network devices comprising a processor and a memory (Each of the routers per Fig 1 are represent by Fig 3 which has a processor and a memory)

transmitting information associated with a route update or withdraw to neighboring apparatus wherein the reason information comprises a reason for the route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw (Network interface in Router per Fig 3 transmits message which defines routes to be withdrawn per Fig 5 )

receiving a reason information associated with a received update or withdraw (Router per Fig 3 has a network interface which receives message which defines routes to be withdrawn per Fig 5)

using said received information to determine which of its candidate routes are also affected by substantially the same event that triggered an initial route update or withdrawn and which of its candidate route are not affected ( The receiving router uses withdrawn route information to

Art Unit: 2419

update routing table based upon list of IP address. Withdrawn information which was received due to a triggered event as well as other updates such as flags per Fig 5 or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Chen does not expressly call for: reason information

Bi teaches: reason information (message has information element with reason encoded into information element with the reason cause code per col. 7 lines 49 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the reason of Bi to transmitting and receiving of Chen in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

Regarding claim 24, wherein a candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn a labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9. Any update associated with withdraw is inherently transient)

Referring to claim 26, Chen teach: computer readable medium for storing a set of instructions (Memory per Fig 3 and per col. 4 line 43 to col. 5 line 4 of Chen) wherein said instructions are executed on a processor (Processor per Fig 3 and per col. 4 line 43 to col. 5 line 4 of Chen )

transmitting information associated with a route update or withdraw (Figure 5 shows the message listing withdrawn routes)

Chen does not expressly call for: transmitting a reason

Bi teaches: transmitting a reason (message sent has information element with reason encoded into information element with the reason cause code per col. 7 lines 49 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the transmitting a reason of Bi to the routing message of Chen in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

Referring to claim 27, the combination of Chen and Bi teach the computer readable medium of claim 26 and Chen teaches: receiving information associated with a received update or withdrawn (Network Interface per Fig 3 receives withdraw message per Fig 5)

using said received information to determine which of its candidate routes are also affected by substantially the same event that triggered an initial route update or withdrawn and which of its

Art Unit: 2419

candidate route are not affected ( The ROUTE PROCESSOR per Fig 3 processing the withdrawn route information. Withdrawn information which was received due to a triggered event as well as other updates such as flags per Fig 5 or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Chen does not expressly call for: receiving reason information

Bi teaches: receiving reason information (message sent has information element with reason encoded into information element with the reason cause code per col. 7 lines 49 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the receiving a reason of Bi to means for receiving and means for determining of Chen and Bi in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

Regarding claim 28, wherein said candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn. Any route that has been withdrawn will inherently be a transient route and the receiving router labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9)

4. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (U.S. Patent No.: 6,567,380) in view of Bi (U.S. Patent No.: 6,757,278) further in view of Zaumen (U.S. Patent No.: 5,881,243)

Referring to claim 5, the combination of Chen and Bi teach the method of claim 1 and reason information

The combination of Chen and Bi do not expressly call for: change in cost of link between two nodes

Zaumen teaches: change in cost of links between two nodes (update message cost of links per col. 1 lines 47 to 52)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the change in cost of links between two nodes of Zaumen in place of a reason information of the combination of Chen and Bi in order to communicate the cost of the change of link.



Art Unit: 2419

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Referring to claim 1, claim 1 is directed to a method but does not have any physical structure defined in the claim limitations to perform the method; therefore, this claim is non-statutory. None of the dependent claims define any physical structure to perform the method so they are also non-statutory.

***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1 & 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/875,124

Art Unit: 2419

Referring to claim 1 of the instant application; claim 1 of application 10/875,124 teaches: forwarding a transient route notification message marking the route as no longer valid or reason for update or withdraw which is sent to another inherent router which receives this message

Regarding claim 2 of the instant application, claim 1 of application 10/875,124 teaches: route notification message marking the route as no longer valid or reason for update or withdraw which is sent to another inherent router which receives this message is sent along with the message

This is a provisional obviousness-type double patenting rejection.

6. Claims 1 & 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/670,940. Although the conflicting claims are not identical they are not patentably distinct by merely broadening because claims 1 & 2 of the instant application are broader than claim 1 of 10/670,940. Claim 1 & 2 merely broaden the claim language of claim 1 of the instant application 10/670,940 by eliminating RIB receiver and route disqualification logic.

Referring to claim 1 of the instant application; claim 1 of application 10/670,940 teaches: receiving a message which indicates that a route should be withdrawn based upon unreachability or reason.

Regarding claim 2 of the instant application, claim 1 of application 10/670,940 teaches: route withdrawn based upon unreachability is sent along with the message

This is a provisional obviousness-type double patenting rejection.

### ***Claim Objections***

7. Claims 6-9, 12-14, 16, 18, 20-22 are objected to because of the following informalities:

Referring to claims 6, 8, 12, 16, 18, & 20; the examiner objects to the usage of "its" when applicant is referring to "said node". Appropriate correction is required.

### ***Allowable Subject Matter***

8. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if the 101 rejection can be overcome and if the obvious double patenting rejection and

Art Unit: 2419

if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 7-9 & 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if the 101 rejection and the claim objections and obvious double patenting can be rejection can be overcome and if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 18, 21, & 22 are objected to as being dependent upon a rejected base claim, but would be allowable if the claim objections and obvious double patenting can be rejection can be overcome and if rewritten in independent form including all of the limitations of the base claim and any intervening claims

11. Claims 25 & 29 are objected to as being dependent upon a rejected base claim, but would be allowable if the obvious double patenting can be rejection can be overcome and if rewritten in independent form including all of the limitations of the base claim and any intervening claims

***Response to Amendment***

12. Applicant's arguments with respect to claim 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2419

***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT W. WILSON whose telephone number is (571)272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571/272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert W Wilson/  
Primary Examiner, Art Unit 2419

1/13/09